

Preventing Worker Electrocutions

HazAlert Publication by the Kentucky Fatality Assessment and Control Evaluation Program (FACE)
* July 2002 * Kentucky Injury Prevention and Research Center, University of Kentucky.

Over the last 3 months in Kentucky, 5 workers have been electrocuted while on the job. Three of the fatal incidents involved contact with electrical wires and two involved contact with overhead power lines. Nationwide, electrocutions accounted for 384 worker deaths last year. Following are case reports of these 5 deaths and recommendations to prevent fatal injuries due to electrocutions.

A 50-year old electrician was performing electrical maintenance on an energized distribution box. The victim came into contact with a bus bar in the distribution box and was electrocuted. The victim, who had 30 years of experience, was discovered dead by a coworker.

A 58-year old electrician, was doing electrical work on a mine shuttle car cable when an electric arc occurred at the female receptacle of the shuttle car. The arcing produced severe burns and the victim was transported to the hospital, where he died over a month later from the sustained injuries.

After contact with a 7200 volt power line, a 31-year old construction foreman was electrocuted. The victim was in the process of repositioning electrical scaffolding when the scaffolding made contact with the overhead power line. The victim died immediately.

A construction worker was electrocuted when the hydraulic boom of a truck he contacted came into contact with an overhead power line. The worker was part of a crew setting guardrail posts.

A 52-year old systems control engineer was electrocuted as he reached for a wire while working on an underground electrical cable. The

victim was pronounced dead a half hour later.

Whether you are working near overhead powerlines or working with electrical circuitry or cords, the following precautions are recommended:

- **Engineer and plan projects to eliminate the presence of overhead powerlines.**
- **Do not work on energized system components.**
- **Be alert and survey your work area(s) for overhead power lines before moving any high scaffolds or other conductive equipment.**
- **Maintain required clearance distances between equipment and overhead powerlines.**
- **Wear the appropriate protective equipment such as gloves, hats, and boots.**
- **Identify all circuitry to be worked on. De-energize circuitry prior to work, and verify the circuitry is de-energized.**
- **When troubleshooting, make sure that the appropriate diagnostic equipment is used for the specific type of repair needed.**
- **Provide proper grounding for electrical lines. A power line needs to be grounded on BOTH sides of the specific work area and needs to be grounded to the system neutral. Grounds must be attached and detached from the system neutral first. (source: NIOSH)**

Kentucky FACE is an occupational fatality surveillance and intervention project. Its purpose is to collect data on work-related fatalities in Kentucky and to develop recommendations and strategies for prevention.